

REMARKS

These remarks are in response to the office action mailed November 3, 2005. Claim 115 has been canceled without prejudice to Applicants' right to prosecute the canceled subject matter in any divisional, continuation, continuation-in-part or other application. Claims 63-87, 89, 93, 97, 99, 101, 103, 105, 107, 109, 111 and 116-125 have been amended. Support for the amendments can be found throughout the specification as filed. Generally the amendments are provided to correct certain claim terms and to clarify the mutations with reference to a particular sequence. New claims 126 and 127 have been added. Support for the percent identity can be found in the specification at page 21, line 2, where in the specification recites from 70% to 99% identity (e.g., 98% falls within this range). Support for the ATCC accession no. can be found, for example, at page 4 lines 5-12; page 26, lines 11-13; and page 34, lines 24-28. No new matter is believed to have been introduced.

I. REJECTION UNDER 35 U.S.C. §112, FIRST PARAGRAPH

Claims 63-90, 93, 94 and 97-110 stand rejected under 35 U.S.C. §112, first paragraph, because the specification, while being enabling for a galactose oxidase of SEQ ID NO:10-21, allegedly does not reasonably provide enablement for a galactose oxidase variant having 90% sequence identity to SEQ ID NO:10. The specification alleges does not enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the invention commensurate in scope with these claims. Applicants respectfully traverse this rejection.

The claims have been amended to more clearly set forth the invention.

Applicants believe that the amendments indirectly address the rejections in the Office Action. As the Examiner indicates in the Office Action, the skill in the art for performing mutagenesis and screening is high. In fact, the Examiner will recognize that the ability to mutagenize and screen hundreds, if not thousands, of variants can be accomplished easily and rapidly without undue experimentation. In fact, there are numerous commercially available entities that have robotic systems that can rapidly screen for activity. Accordingly, Applicants submit that undue experimentation is not needed to enable the scope of the claims.

The Examiner further agrees that Applicants demonstrate a number of residues which can be mutagenized and that such mutagenesis results in functional activity. The Examiner estimates that the disclosure teaches variability of 2% (i.e., 98% identity). Applicants have added new claim 127 which recites 98% identity.

The Office Action alleges that the claims are drawn to a genus of polypeptides having undefined structure. Applicants respectfully disagree. The claims recite both structure and function and that the subject matter of the specification, as recognized by the Examiner, falls within Applicants' claim scope.

Accordingly, Applicants respectfully request withdrawal of the §112, first paragraph rejection.

II. REJECTION UNDER 35 U.S.C. §112, SECOND PARAGRAPH

Claims 63-90, 93, 94, 97-110 and 113-125 stand rejected under 35 U.S.C. §112, second paragraph as allegedly being indefinite for failing to particularly point

out and distinctly claim the subject matter which applicant regards as the invention. Applicants respectfully traverse this rejection with respect to the claims now pending.

The Office Action alleges that the phrase "corresponding to" is unclear.

Applicants have amended the claims to remove "corresponding to" as suggested by the Examiner.

The Office Action also alleges that claims 65 and 88 are unclear in that they recite a D at position 537 and that SEQ ID NO:10 already has a D at 537. Claim 65 has been amended to recite SEQ ID NO:10. Applicants submit that the independent claim (claim 64) recites SEQ ID NO:10 wherein the amino acid at 537 is N.

Accordingly, claim 65 is identifying a mutation the results in a change at amino acid 537 to D.

Claim 88 depends upon claim 87 which identifies a mutation in the wild-type enzyme at position 537 (when compared to SEQ ID NO:10).

Claim 111 has been amended to set forth a proper Markush group as requested by the Examiner.

Applicants believe that the foregoing amendment and remarks overcome the rejection. Accordingly, Applicants respectfully request withdrawal of the §112, second paragraph rejection.

Respectfully submitted,

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